=> d his

(FILE 'HOME' ENTERED AT 08:43:25 ON 25 FEB 2005)

FILE 'CAPLUS' ENTERED AT 08:43:35 ON 25 FEB 2005 E TIMPE/AU L1 324 S E10-15 L2 0 S L1 AND NIP L3 1 S L1 AND MECHANISTICAL L40 S NIP15 L5 3996 S NIP 358 S NIP AND 15 L6 L7 0 S L6 AND KODAK L8 11 S L6 AND CONF? L9 3 S L1 AND DIGITAL AND PLATE L10 2 S L1 AND PERFLUORO? L11 2 S L10 NOT L9 L12 0 S L1 AND DIGTAL AND PRINTING L13 0 S L1 AND DIGTAL L14 3 S L1 AND DIGITAL 0 S L14 NOT L9 L15 L16 3 S L14 AND PRINTING L17 0 S L16 NOT L9 L18 2 S L14 AND (IR OR INFRARED OR INFRA RED) L19 0 S L18 NOT L9 L20 0 S L1 AND PRITING 62 S L1 AND PRINTING

=> log y

L22

L23

L24

COST IN U.S. DOLLARS

SINCE FILE
ENTRY
SESSION
FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

SINCE FILE
TOTAL
ENTRY
SESSION
-40.15

STN INTERNATIONAL LOGOFF AT 08:52:12 ON 25 FEB 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

59 S L21 NOT L9

6 S L22 AND THERMAL

45 S L22 AND PHOTO?

LOGINID:sssptau156cxh

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

Page 219by Examiner Cynthia Hamilton

```
NEWS
                 Web Page URLs for STN Seminar Schedule - N. America
     1
     2
NEWS
                 "Ask CAS" for self-help around the clock
NEWS 3
         SEP 01
                New pricing for the Save Answers for SciFinder Wizard within
                 STN Express with Discover!
NEWS 4
        OCT 28
                 KOREAPAT now available on STN
NEWS 5 NOV 30 PHAR reloaded with additional data
NEWS 6 DEC 01 LISA now available on STN
NEWS 7 DEC 09
                 12 databases to be removed from STN on December 31, 2004
NEWS 8 DEC 15
                 MEDLINE update schedule for December 2004
NEWS 9 DEC 17
                 ELCOM reloaded; updating to resume; current-awareness
                 alerts (SDIs) affected
     10 DEC 17
NEWS
                 COMPUAB reloaded; updating to resume; current-awareness
                 alerts (SDIs) affected
NEWS
      11 DEC 17
                 SOLIDSTATE reloaded; updating to resume; current-awareness
                 alerts (SDIs) affected
      12 DEC 17
NEWS
                 CERAB reloaded; updating to resume; current-awareness
                 alerts (SDIs) affected
NEWS
      13 DEC 17
                 THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
NEWS
     14 DEC 30
                 EPFULL: New patent full text database to be available on STN
NEWS 15 DEC 30
                 CAPLUS - PATENT COVERAGE EXPANDED
NEWS 16 JAN 03
                 No connect-hour charges in EPFULL during January and
                 February 2005
NEWS
      17 FEB 25
                 CA/CAPLUS - Russian Agency for Patents and Trademarks
                 (ROSPATENT) added to list of core patent offices covered
NEWS
     18 FEB 10
                 STN Patent Forums to be held in March 2005
NEWS
     19 FEB 16
                 STN User Update to be held in conjunction with the 229th ACS
                 National Meeting on March 13, 2005
NEWS
      20 FEB 28
                 PATDPAFULL - New display fields provide for legal status
                 data from INPADOC
NEWS 21 FEB 28
                 BABS - Current-awareness alerts (SDIs) available
NEWS 22 FEB 28
                 MEDLINE/LMEDLINE reloaded
NEWS 23 MAR 02
                 GBFULL: New full-text patent database on STN
NEWS 24 MAR 03
                 REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS 25 MAR 03
                MEDLINE file segment of TOXCENTER reloaded
NEWS EXPRESS
             JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
              MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005
NEWS HOURS
              STN Operating Hours Plus Help Desk Availability
NEWS INTER
              General Internet Information
NEWS LOGIN
              Welcome Banner and News Items
NEWS PHONE
              Direct Dial and Telecommunication Network Access to STN
NEWS WWW
              CAS World Wide Web Site (general information)
```

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 15:47:21 ON 15 MAR 2005

=> log y COST IN U.S. DOLLARS

SINCE FILE

TOTAL

FULL ESTIMATED COST ENTRY SESSION 0.21 0.21

STN INTERNATIONAL LOGOFF AT 15:47:26 ON 15 MAR 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptau156cxh

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

```
* * * * * * * * *
                     Welcome to STN International
NEWS
                 Web Page URLs for STN Seminar Schedule - N. America
NEWS
     2
                 "Ask CAS" for self-help around the clock
NEWS
         SEP 01
                 New pricing for the Save Answers for SciFinder Wizard within
                 STN Express with Discover!
NEWS 4
         OCT 28
                 KOREAPAT now available on STN
NEWS 5 NOV 30
                 PHAR reloaded with additional data
NEWS 6 DEC 01
                 LISA now available on STN
     7 DEC 09
NEWS
                 12 databases to be removed from STN on December 31, 2004
NEWS 8 DEC 15
                 MEDLINE update schedule for December 2004
NEWS 9 DEC 17
                 ELCOM reloaded; updating to resume; current-awareness
                 alerts (SDIs) affected
NEWS
      10 DEC 17
                 COMPUAB reloaded; updating to resume; current-awareness
                 alerts (SDIs) affected
NEWS
      11 DEC 17
                 SOLIDSTATE reloaded; updating to resume; current-awareness
                 alerts (SDIs) affected
NEWS
      12 DEC 17
                 CERAB reloaded; updating to resume; current-awareness
                 alerts (SDIs) affected
NEWS 13 DEC 17
                 THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
NEWS 14 DEC 30
                 EPFULL: New patent full text database to be available on STN
NEWS 15 DEC 30
                 CAPLUS - PATENT COVERAGE EXPANDED
NEWS 16 JAN 03
                 No connect-hour charges in EPFULL during January and
                 February 2005
NEWS 17 FEB 25
                 CA/CAPLUS - Russian Agency for Patents and Trademarks
                 (ROSPATENT) added to list of core patent offices covered
NEWS 18 FEB 10
                 STN Patent Forums to be held in March 2005
NEWS 19 FEB 16 STN User Update to be held in conjunction with the 229th ACS
                 National Meeting on March 13, 2005
NEWS 20 FEB 28
                 PATDPAFULL - New display fields provide for legal status
                 data from INPADOC
NEWS 21 FEB 28
                 BABS - Current-awareness alerts (SDIs) available
NEWS 22 FEB 28
                 MEDLINE/LMEDLINE reloaded
NEWS 23 MAR 02
                 GBFULL: New full-text patent database on STN
NEWS
      24 MAR 03
                 REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS 25 MAR 03
                 MEDLINE file segment of TOXCENTER reloaded
```

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 15:49:50 ON 15 MAR 2005

=> file caplus
COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 15:50:01 ON 15 MAR 2005 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 15 Mar 2005 VOL 142 ISS 12 FILE LAST UPDATED: 14 Mar 2005 (20050314/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s infrared or ir or infra red
232042 INFRARED

562469 IR

4681 INFRA

363053 RED

4071 INFRA RED

(INFRA(W)RED)

L1 637015 INFRARED OR IR OR INFRA RED

=> s l1 and dye

242856 DYE

L2 7711 L1 AND DYE

```
=> s 12 and fluoro?
       379314 FLUORO?
          309 L2 AND FLUORO?
L3
=> s 13 and perfluoro?
        47229 PERFLUORO?
           10 L3 AND PERFLUORO?
L4
=> s 14 not 13
            0 L4 NOT L3
=> s lithograph? or planograph?
        43956 LITHOGRAPH?
          714 PLANOGRAPH?
L6
        44388 LITHOGRAPH? OR PLANOGRAPH?
=> s 16 and 13
           6 L6 AND L3
=> s 14 and 16
            0 L4 AND L6
=> d 17 all 1-6
    ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
L7
    2005:158314 CAPLUS
AN
ED
    Entered STN: 24 Feb 2005
TТ
    Polymer compositions and lithographic printing plates using them
    with excellent development latitude and chemical and wear resistance
IN
    Nakamura, Ippei
    Fuji Photo Film Co., Ltd., Japan
PA
    Jpn. Kokai Tokkyo Koho, 82 pp.
SO
    CODEN: JKXXAF
DT
    Patent
LΑ
    Japanese
    ICM G03F007-033
IC
    ICS G03F007-00; G03F007-004; G03F007-11
    74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
    Reprographic Processes)
    Section cross-reference(s): 38
FAN.CNT 1
    PATENT NO.
                       KIND
                              DATE
                                         APPLICATION NO.
                                                               DATE
                       ----
                              -----
                                          -----
                                                                -----
    JP 2005049640
                        A2
                              20050224
                                          JP 2003-281935
                                                                20030729
PRAI JP 2003-281935
                              20030729
CLASS
               CLASS PATENT FAMILY CLASSIFICATION CODES
PATENT NO.
                      ______
JP 2005049640
                ICM
                       G03F007-033
                ICS
                       G03F007-00; G03F007-004; G03F007-11
JP 2005049640
                FTERM 2H025/AA04; 2H025/AA06; 2H025/AB03; 2H025/AC08;
                       2H025/AD03; 2H025/CB14; 2H025/CB41; 2H025/CC11;
                       2H025/CC20; 2H025/DA36; 2H025/FA17; 2H096/AA06;
                       2H096/BA09; 2H096/EA04; 2H096/GA08
AB
    The compns., changing solubility to aqueous alkaline solns. by IR laser
    exposure, contain copolymers, bearing monomer units AZQY (A =
    polymerizable double bond-containing monovalent organic group; Z = single bond,
    divalent organic group; X = R1-4-substituted phenylene; R1-4 = H, halo,
    alkoxy, alkyl, aryl; Y = aminosulfonyl, OH) and onium salt-containing monomer
```

units, and IR absorbers. The plates consist of supports, lower recording layers containing the copolymers, and upper recording layers containing

water-insol. and alkali-soluble polymers and development inhibitors, wherein the lower and/or upper layers contain IR absorbers.

ST lithog plate IR laser exposure sensitivity; IR absorber printing plate development latitude; chem resistance lithog plate aminosulfonylphenyl polymer

IT Optical materials
(IR absorbers; lithog. printing plates containing certain

copolymers bearing onium salts with good development latitude and chemical and wear resistance)

IT Dyes

(IR-absorbing, recording layer; lithog. printing plates containing certain copolymers bearing onium salts with good development latitude and chemical and wear resistance)

IT IR materials

(absorbers; lithog. printing plates containing certain copolymers bearing onium salts with good development latitude and chemical and wear resistance)

IT Phenolic resins

RL: TEM (Technical or engineered material use); USES (Uses) (novolak, cresol-based, recording layer; lithog. printing plates containing certain copolymers bearing onium salts with good development latitude and chemical and wear resistance)

IT Lithographic plates

(presensitized; lithog. printing plates containing certain copolymers bearing onium salts with good development latitude and chemical and wear resistance)

IT Fluoropolymers

RL: TEM (Technical or engineered material use); USES (Uses) (recording layer; lithog. printing plates containing certain copolymers bearing onium salts with good development latitude and chemical and wear resistance)

IT Polymers

RL: TEM (Technical or engineered material use); USES (Uses) (water-insol. and alkali-soluble, upper recording layer; lithog. printing plates containing certain copolymers bearing onium salts with good development latitude and chemical and wear resistance)

IT 134127-48-3 193687-61-5

RL: TEM (Technical or engineered material use); USES (Uses)
(IR-absorbing dye, recording layer; lithog.
printing plates containing certain copolymers bearing onium salts with good development latitude and chemical and wear resistance)

IT .27029-76-1, PR 54046 217651-44-0 251098-96-1 844699-05-4 844699-06-5 844699-07-6 844699-08-7 844699-09-8 844699-10-1 844699-11-2

RL: TEM (Technical or engineered material use); USES (Uses) (recording layer; lithog. printing plates containing certain copolymers bearing onium salts with good development latitude and chemical and wear resistance)

IT 7429-90-5, Aluminum

RL: TEM (Technical or engineered material use); USES (Uses) (support; lithog. printing plates containing certain copolymers bearing onium salts with good development latitude and chemical and wear resistance)

L7 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:77992 CAPLUS

DN 140:136456

```
STN search for 10765,797
    Entered STN: 30 Jan 2004
ED
    Lithographic printing plates for IR laser direct
ΤI
    platemaking with excellent scratch resistance and development latitude
    Miyake, Hideo
IN
    Fuji Photo Film Co., Ltd., Japan
PA
    Jpn. Kokai Tokkyo Koho, 42 pp.
SO
    CODEN: JKXXAF
DT
    Patent
LA
    Japanese
IC
    ICM G03F007-004
    ICS G03F007-00
    74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
    Reprographic Processes)
FAN.CNT 1
    PATENT NO.
                       KIND DATE
                                        APPLICATION NO.
                       ----
     -----
                                          -----
                                                                 -----
                                                                               N0
    JP 2004029680
                        A2
                               20040129
                                        JP 2002-189993
                                                            20020628
PRAI JP 2002-189993
                              20020628
CLASS
PATENT NO.
               CLASS PATENT FAMILY CLASSIFICATION CODES
JP 2004029680 ICM
                       G03F007-004
               ICS
                       G03F007-00
JP 2004029680 FTERM 2H025/AA04; 2H025/AA12; 2H025/AA13; 2H025/AB03;
                       2H025/AC08; 2H025/AD01; 2H025/AD03; 2H025/CB52;
                       2H025/CC04; 2H025/CC20; 2H025/FA03; 2H025/FA17;
                       2H096/AA07; 2H096/AA08; 2H096/BA16; 2H096/BA20;
                       2H096/CA12; 2H096/EA04; 2H096/GA08
AB
    The plates have recording layers containing water-insol. and alkali-soluble
    polymers and IR absorbers on supports, wherein the layers are
     formed from coatings containing surfactants bearing reactive groups and F or
     Si elements.
ST
    lithog printing plate scratch resistance; printing plate recording layer
    reactive surfactant; fluorine surfactant plate IR development
    latitude
IT
    Optical materials
        (IR absorbers; lithog. printing plates having reactive
        surfactant-containing recording layers with good scratch resistance and
       development latitude for IR laser direct platemaking)
ΙT
    IR materials
        (absorbers; lithog. printing plates having reactive surfactant-containing
       recording layers with good scratch resistance and development latitude
       for IR laser direct platemaking)
IT
    Phenolic resins, uses
    RL: TEM (Technical or engineered material use); USES (Uses)
        (novolak, cresol-based, recording layer; lithog. printing plates having
       reactive surfactant-containing recording layers with good scratch
       resistance and development latitude for IR laser direct
       platemaking)
IT
    Lithographic plates
        (presensitized; lithog. printing plates having reactive
       surfactant-containing recording layers with good scratch resistance and
       development latitude for IR laser direct platemaking)
TT
    Fluoropolymers, uses
    RL: TEM (Technical or engineered material use); USES (Uses)
        (reactive surfactant, recording layer; lithog. printing plates having
       reactive surfactant-containing recording layers with good scratch
       resistance and development latitude for IR laser direct
```

platemaking)

Surfactants

ΙŢ

```
(reactive; lithog. printing plates having reactive surfactant-containing
        recording layers with good scratch resistance and development latitude
        for IR laser direct platemaking)
IT
     134127-48-3
     RL: TEM (Technical or engineered material use); USES (Uses)
        (IR-absorbing dye, recording layer; lithog.
       printing plates having reactive surfactant-containing recording layers with
       good scratch resistance and development latitude for IR laser
       direct platemaking)
IT
     649756-66-1 649756-67-2
                               649756-69-4 649756-70-7 649756-71-8
     649756-73-0
                  649756-75-2
                               650609-70-4
                                            650609-72-6
    RL: TEM (Technical or engineered material use); USES (Uses)
        (reactive surfactant, recording layer; lithog. printing plates having
       reactive surfactant-containing recording layers with good scratch
       resistance and development latitude for IR laser direct
       platemaking)
     58931-97-8P, Methacrylic acid-propyl methacrylate copolymer
TT
    RL: IMF (Industrial manufacture); TEM (Technical or engineered material
    use); PREP (Preparation); USES (Uses)
        (recording layer; lithog. printing plates having reactive
        surfactant-containing recording layers with good scratch resistance and
       development latitude for IR laser direct platemaking)
TT
     27029-76-1, PR 54046
                          141634-00-6, Acrylonitrile-N-(4-
     aminosulfonylphenyl) methacrylamide-methyl methacrylate copolymer
    RL: TEM (Technical or engineered material use); USES (Uses)
        (recording layer; lithog. printing plates having reactive
        surfactant-containing recording layers with good scratch resistance and
       development latitude for IR laser direct platemaking)
L7
    ANSWER 3 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
    2002:553400 CAPLUS
AN
DN
    137:132119
ED
    Entered STN: 26 Jul 2002
ΤI
    IR-sensitive direct-imaging positive-working
    lithographic plate precursor
IN
    Oda, Akio
    Fuji Photo Film Co., Ltd., Japan
PA
SO
    Jpn. Kokai Tokkyo Koho, 14 pp.
    CODEN: JKXXAF
DT
    Patent
LA
    Japanese
IC
    ICM G03F007-004
    ICS G03F007-004; B41N001-14; G03F007-00; G03F007-032; G03F007-039;
CC
    74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
    Reprographic Processes)
FAN.CNT 1
    PATENT NO.
                      KIND
                              DATE
                                        APPLICATION NO.
                                                               DATE
                       ----
                                          -----
                              -----
                                                                -----
    JP 2002207288
                        A2
                              20020726
                                        JP 2001-2363
                                                                20010110
PRAI JP 2001-2363
                              20010110
CLASS
PATENT NO.
              CLASS PATENT FAMILY CLASSIFICATION CODES
 -----
JP 2002207288 ICM
                      G03F007-004
                      G03F007-004; B41N001-14; G03F007-00; G03F007-032;
                      G03F007-039; G03F007-095
AB
    The title lithog. plate precursor has a heat-sensitive layer, which
```

contains a heat-sensitive water-insol. alkali solubilizable resin, an

IR-absorbing dye, a F-containing polymer, on a hydrophilic

```
support, wherein the heat-sensitive layer contains ≥1.4 % F-containing
    polymer based on the total solid component and has ≤1.4 g/cm2
    coating amount The lithog. plate precursor shows the wide development
    latitude.
ST
    IR sensitive imaging pos working lithog plate precursor
TТ
    Lithographic plates
       (IR-sensitive direct-imaging pos.-working lithog. plate
       precursor)
    Fluoropolymers, uses
IT
    RL: TEM (Technical or engineered material use); USES (Uses)
       (fluoropolymer for IR-sensitive direct-imaging
       pos.-working lithog. plate precursor)
    115515-73-6, Defensa MCF 312
                                137462-24-9, Megafac F 176
IT
    RL: TEM (Technical or engineered material use); USES (Uses)
       (fluoropolymer for IR-sensitive direct-imaging
       pos.-working lithog. plate precursor)
    ANSWER 4 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
L7
AN
    2001:778174 CAPLUS
DN
    135:325292
ED
    Entered STN: 26 Oct 2001
TI
    Near-IR-sensitive positive photoimaging materials and
    presensitized lithographic plates therefrom
IN
    Urano, Toshiyoshi; Minakami, Junji
PA
    Mitsubishi Chemical Corp., Japan
SO
    Jpn. Kokai Tokkyo Koho, 16 pp.
    CODEN: JKXXAF
DT
    Patent
LA
    Japanese
IC
    ICM G03F007-004
    ICS B41N001-14; G03F007-00
CC
    74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
    Reprographic Processes)
    Section cross-reference(s): 38, 41
FAN.CNT 1
    PATENT NO.
                      KIND
                            DATE
                                                           DATE
                                       APPLICATION NO.
                      ----
    -----
                             -----
                                         -----
    JP 2001296652
                      A2
                             20011026
                                      JP 2000-113118 20000414
PRAI JP 2000-113118
                             20000414
CLASS
PATENT NO.
              CLASS PATENT FAMILY CLASSIFICATION CODES
-----
JP 2001296652 ICM G03F007-004
               ICS
                      B41N001-14; G03F007-00
os
    MARPAT 135:325292
GI
```

Page 228by Examiner Cynthia Hamilton

Entered STN: 29 Jun 2001

Thermal digital lithographic printing plate

Patel, Jayanti; Saraiya, Shashikant; Hauck, Celin-Savariar; Huang,

2001:472601 CAPLUS

135:84326

AN DN

ED

ΤI

IN

Jianbing; Mikell, Frederic; Shimazu, Kenichi; Merchant, Nishith PA Kodak Polychrome Graphics Company Ltd., USA SO PCT Int. Appl., 39 pp. CODEN: PIXXD2 DT Patent LA English IC ICM B41M005-00 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other CC Reprographic Processes) FAN.CNT 6 PATENT NO. KIND DATE APPLICATION NO. DATE --------------_____ _____ WO 2001045958 A2 PТ 20010628 WO 2000-US42759 20001212 A3 20020131 WO 2001045958 W: BR, JP RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR US 6352811 B1 20020305 US 1999-469490 19991222 BR 2000016716 Α 20020903 BR 2000-16716 20001212 20021211 EP 2000-992907 20001212 EP 1263590 A2 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR Т2 JP 2003518264 20030603 JP 2001-546484 20001212 PRAI US 1999-469490 A 19991222 US 1998-90300P US 1999-301866 WO 2000-US42759 P 19980623 A2 19990429 W 20001212 CLASS PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES -----WO 2001045958 ICM B41M005-00 US 6352811 ECLA B41C001/10A The invention relates to thermal lithog. plates that are imaged with an IR laser and processed with an aqueous alkaline developer. The thermal imaging element is made up of a substrate and a composite layer structure composed of 2 layer coatings. Preferably, the 1st layer of the composite is composed of an aqueous developable polymer mixture containing a solubility inhibiting material and a photothermal conversion material which is contiguous to the hydrophilic substrate. The 2nd layer of the composite is insol. in the aqueous solution, is ink receptive, and is composed of ≥1 nonag. soluble polymers which are soluble or dispersible in a solvent which does not dissolve the 1st layer. The 2nd layer may also contain a photothermal conversion material. Alternatively, the composite layer may be free of photothermal conversion material when thermal imaging is carried out using a thermal printing head. ST thermal digital lithog printing plate acrylic binder resin urethane TΤ IR lasers Lithographic plates Thermal printing materials (IR-sensitive thermal lithog. plate containing acrylic binder resin and carbonyl-containing solubility inhibitor) Polyurethanes, uses IT RL: DEV (Device component use); MOA (Modifier or additive use); NUU (Other use, unclassified); POF (Polymer in formulation); USES (Uses) (IR-sensitive thermal lithog, plate containing acrylic binder resin and carbonyl-containing solubility inhibitor)

RL: DEV (Device component use); MOA (Modifier or additive use); NUU (Other

use, unclassified); POF (Polymer in formulation); USES (Uses)

Page 229by Examiner Cynthia Hamilton

Fluoropolymers, uses

IT

```
(MP 1100; coating for thermal digital lithog. printing plate containing)
     Phenolic resins, uses
IT
     RL: DEV (Device component use); MOA (Modifier or additive use); NUU (Other
     use, unclassified); POF (Polymer in formulation); USES (Uses)
        (novolak; IR-sensitive thermal lithog. plate containing acrylic
        binder resin and carbonyl-containing solubility inhibitor)
IT
     Acrylic polymers, uses
     RL: DEV (Device component use); MOA (Modifier or additive use); NUU (Other
     use, unclassified); POF (Polymer in formulation); USES (Uses)
        (polyester-; IR-sensitive thermal lithog. plate containing
        acrylic binder resin and carbonyl-containing solubility inhibitor)
IT
     Recording materials
        (thermal; IR-sensitive thermal lithog. plate containing acrylic
        binder resin and carbonyl-containing solubility inhibitor)
IT
     9002-84-0, MP 1100
     RL: DEV (Device component use); MOA (Modifier or additive use); NUU (Other
     use, unclassified); POF (Polymer in formulation); USES (Uses)
        (MP 1100; coating for thermal digital lithog. printing plate containing)
IT
     2390-60-5, Victoria Blue BO 5496-71-9, ADS 1060A 9004-70-0, E 950
     9011-14-7, PMMA 59269-51-1, Poly(vinyl phenol) 134127-48-3, ADS 830A
     199444-11-6, KF 654B-PINA
     RL: DEV (Device component use); MOA (Modifier or additive use); NUU (Other
     use, unclassified); POF (Polymer in formulation); USES (Uses)
        (coating for thermal digital lithog. printing plate containing)
     346593-65-5, PC-T 153 346594-06-7, JK 5
IT
     RL: DEV (Device component use); NUU (Other use, unclassified); RCT
     (Reactant); RACT (Reactant or reagent); USES (Uses)
        (developer for thermal digital lithog. printing plate containing)
IT
     634-21-9 212964-63-1
     RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or
     reagent); USES (Uses)
        (solubility-inhibitor dye; coating for thermal digital lithog.
        printing plate containing)
     346587-45-9P
                   346587-46-0P
IT
                                  346587-47-1P
                                                 346587-48-2P
                                                                 346587-50-6P
     346587-52-8P
     RL: DEV (Device component use); PNU (Preparation, unclassified); POF
     (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or
     engineered material use); PREP (Preparation); USES (Uses)
        (synthesis of acrylic binder resin free of carboxyl group for thermal
        digital lithog. printing plate)
L7
     ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
     1985:496431 CAPLUS
AN
DN
     103:96431
ED
     Entered STN: 22 Sep 1985
TI
     Highly photosensitive aqueous solvent-developable printing assembly
IN
     Herbert, Alan J.
PA
     Minnesota Mining and Manufacturing Co., USA
SO
     U.S., 9 pp.
     CODEN: USXXAM
DT
     Patent
LA
     English
     ICM G03G013-28
IC
NCL
     430049000
CC
     74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
     Reprographic Processes)
FAN.CNT 1
     PATENT NO.
                         KIND
                                DATE
                                          APPLICATION NO.
                                                                   DATE
                         ----
                                ------
                                            -----
PΙ
     US 4521503
                                19850604
                                           US 1984-609286
                                                                   19840511
```

```
EP 161870
                              19851121 EP 1985-303104
                       A2
                                                                19850501
                       A3
    EP 161870
                              19870923
    EP 161870
                        B1
                              19901219
        R: BE, DE, FR, GB, IT
                    A2
                                          JP 1985-98883
    JP 60244952
                              19851204
                                                                19850509
PRAI US 1984-609286
                        Α
                              19840511
CLASS
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES
 US 4521503
              ICM
                       G03G013-28
               NCL
                       430049000
    A photoimaging assembly useful for preparation of lithog. plates and printed
AB
    circuits consists of (1) an electroconductive support, (2) a photoresist
    layer sensitive to light at 250-450 nm region, and (3) a photoconductive
    upper layer containing spectrally sensitized Zn oxide sensitive to 370-1200 nm
    range in H2O-soluble or H2O-dispersible binder. Thus, an Al support
    (silicated and primed) was coated with a 8 weight% solids composition
containing
    poly(alkyl orthophthalate) prepolymer, poly(vinylpyrrolidone),
    pentaerythritol tetraacrylate, cellulose acetate butyrate, polyurethane,
    2-(p-methoxystyryl)-4,6-bis(trichloromethyl)-s-triazine,
    paraformaldehyde-p-diazodiphenylamine copolymer fluoroborate
    salt, yellow oil soluble dye dispersion, Microlith Blue 4 GK,
    MeCOEt, DMF, ethylene glycol monomethyl ether, air dried, overcoated with
    a dispersion containing EtOH, poly(vinylpyrrolidone), Photox 80 IR
    -125, dried, corona-discharged, IR imagewise exposed, developed
    with Scott System 200 toner, exposed in Colite arc frame, and developed
    with H2O.
ST
    printing plate photoimaging assembly; photoconductor photoresist imaging
    structure; elec circuit photoconductor photoresist structure
IT
    Photoimaging compositions and processes
        (photosensitive assembly containing electroconductive support and
       photoresist layer and photoconductive upper layer containing spectrally
       sensitized zinc oxide for)
    Electric circuits
IT
      Lithographic plates
        (photosensitive imaging assembly for preparation of, containing
       electroconductive support and photoresist layer and photoconductive
       upper layer containing spectrally sensitized zinc oxide)
    115-39-9 9003-39-8 9003-53-6 9003-54-7 9004-64-2 9011-14-7 54957-10-7
TΤ
                                                             9010-76-8
    RL: USES (Uses)
        (photoimaging assembly containing electroconductive support and photoresist
       layer and photoconductive zinc oxide layer containing, for preparation of
       lithog. plates and printed circuits)
IT
    1314-13-2, uses and miscellaneous
    RL: USES (Uses)
        (photoimaging assembly containing electroconductive support and photoresist
```

printed circuits)

IT 101-68-8D, reaction products with diols 147-14-8 4986-89-4 9003-39-8 42573-57-9 56646-84-5 62428-08-4 67290-46-4 69220-42-4 RL: USES (Uses)

layer and top layer containing, for preparation of lithog. plates and

(photoimaging assembly containing electroconductive support and photoresist layer containing, and photoconductive top layer, for fabrication of lithog. plates and printed circuits)

=> d his